IOFFE, Veniamin Borisovich; PUGACHEV, N.A., nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Fundamentals of hydrogen production] Osnovy proizvodstva vodoroda. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1960. 429 p. (MIRA 13:2)
(Hydrogen)

FAKTOROVICH, Lev Mikhaylovich; MAUSH, O.I., nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; [illegible], I.M., tekhn.red.

[Designing and installing heat insulation] Proektirovanie i montazh teplovoi izoliatsii. Leningrad, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1960. 439 p. (MIRA 13:5)

(Insulation (Heat))

TORGOVANOVA, V.B.; DUBROVA, N.V.; KRUGLIKOV, N.M.; LOZOVSKIY, M.R.; POMARNATSKIY, M.A.; KROTOVA, V.A.; nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Paleozoic and Mesozoic waters and gases in Western Siberia] Vody i gazy paleozoiskikh i mesozoiskikh otlozhenii Zapadnoi Sibiri. Leningrad, Gos.nauchn.-tekhn.izd-vo neft. i gorno-topl. lit-ry leningr. otd-nie, 1960. 459p. (Leningrad, Vsesoiuznyi neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut. Trudy, no. 159) (MIRA 14:3)

(Siberia, Western--Water, Underground)
(Siberia, Western--Gas, Natural)

STANKEVICH, Lyudmila Ivanovna; DOLMATOV, P.S., vedushchiy red.;
BRUSKIN, D.M., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Key wells of the U.S.S.R.; Pestovo key well (Novogorod Province)].
Pestovskaia opornaia skvazhina (Novgorodskaia oblast'). Leningrad,
Gos.nauchno-tekhnicheskoe izd-vo neft.i gorno-toplivnoi lit-ry,
Leningr. otd-nie, 1961. 91 p. (Leningrad. Vsesoiuznyi
neftianoi nauchno-issledovatel'skii geologorazvedochnyi institut.
Trudy, no.182). (MIRA 15:8)
(Novgorod Province--Petroleum geology)
(Novgorod Province--Gas, Natural--Geology)

GOLYAND, Mikhail Markovich; DOBROVOL'SKIY, A.P., dotsent, kand.tekhn. nauk, nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Calculations and tests of heat insulation] Raschety i ispytaniia teplovoi izoliatsii. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1961. 313 p. (MIRA 14:4)

(Insulation (Heat))

BUTUSOV, Ivan Vasil'yevich; OLEYNIKOV, V.A., nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; YASHCHURZHINSKAYA, A.B., tekhn.red.

[Automatic measuring and regulating instruments] Avtomaticheskie kontrol'no-izmeritel'nye i reguliruiushchie pribory. Izd.2., perer. i dop. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, Leningr.otd-nie, 1961. 495 p. (MIRA 14:4)

(Automatic control) (Electronic measurements)

STAL'SKIY, Vladimir Vil'gel'movich; ZHITOMIRSKIY, Orest Romanovich; LIKHNITSKIY, M.I., nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; SAFRONOVA, I.M., tekhn. red.

[Automation of main gas pipelines] Avtomatizatsiia magistral'nykh gazoprovodov. Leningrad, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 184 p. (MIRA 14:11)
(Gas, Natural—Pipelines)

SIBIRYAKOVA, Lyudmila Vasil'yevna; KRYMGOL'TS, Ya.G., nauchnyy red.; DOLMATOV, P.S., vedushchiy red.; GENNAD'YEVA, I.M., tekhn.red.

[Middle Jurassic fauna of mollusks in the Greater Balkhan Range and its stratigraphic importance] Srednеiurskaia fauna molliuskov Bol'shogo Balkhana i ee stratigraficheskoe znachenie. Leningrad, Gostoptekhizdat, 1961. 232 p. (Leningrad. Vsesoiuznyi geologicheskii institut. Trudy, vol.47). (MIRA 16:3)
(Balkhan Range--Mollusks, Fossil) (Geology, Stratigraphic)

DOLMATOV, R. G.

Dolmatov, R. G.

"Asymmetrical Systems of Operating Large Synchronous Hydraulic Generators (Generator-Phase Asymmetry)." Min Higher Education USSR. Leningrad Polytechnic Inst. imeni M. I. Kalinin. Leningrad, 1954. (Dissertation for the Degree of Candidate in Technical Sciences.)

Knizhnaya Letopis'; No. 27, 2 July, 1955

SOV/144-59-10-7/20

AUTHOR: Dolmatov, R.G., Candidate of Technical Sciences

TITLE: A Synchronous Machine with Double (or "Differential") Supply to the Stator

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1959, Nr 10, pp 58 - 62 (USSR)

ABSTRACT: The speed of a synchronous motor may be controlled over a wide range if the opposite ends of the stator phase windings are supplied from two sources of different frequency and phase-sequence. This article considers such dual supply to an idealised two-phase salient pole synchronous motor whose rotor has two windings on its direct axis and one on its quadrature axis. The results obtained for this machine can easily be extended to machines with any other kind of rotor. The conclusions are also applicable to three-phase three-wire machines, which can always be reduced to equivalent two-phase machines.
The fundamental equations for a two-phase machine are then given. It will be seen from Eqs (3) that there are mutual relations between currents that are of the same frequency or that differ by twice the rotor frequency; accordingly,

Card1/5

A Synchronous Machine with Double (or "Differential") Supply to the Stator

the case is considered in which the stator is supplied by two voltages differing in frequency by twice the rotor frequency. The power of such a machine is given by Eq (6), from which it will be seen that, depending upon the conditions, the machine can operate as a generator or as a motor. As there is a relationship between the two supply frequencies and the rotor speed, it is possible, when using the machine as a motor, to apply a voltage of constant frequency to one end of the stator windings and apply a voltage of varying frequency to the other, so controlling the speed of rotation from half the main synchronous speed down to zero. When the machine is run as a generator the frequency of the induced emf may be smoothly varied by altering the speed of rotation or the supply frequency. The most interesting cases are when the machine runs at half synchronous speed or is stationary. Current and power equations are derived for these two cases. When the machine is stationary it converts power at one phase-sequence into

A Synchronous Machine with Double (or "Differential") Supply to the Stator

power at another phase-sequence and, under these conditions, can act as a selsyn receiver. It is concluded that a synchronous machine with a rotor that is either electrically or magnetically asymmetrical should run stably at speeds below synchronism. The stator currents and powers are easily calculated and if the motor is stationary it can operate as a contactless selsyn receiver.

These findings were verified experimentally by supplying a three-phase machine with two symmetrical systems of voltages of different phase-sequence and frequency. The tests were made on an unloaded motor, type AK-51/4, with a rated output of 2.8 kW. Normal power-frequency supply was connected to one end of the stator windings, while the other was fed from a 15 kVA alternator, type MSA72/4, of opposite phase-sequence.

The motor was started by connecting it directly to the supply with the alternator stationary and it ran up to about half synchronous speed. The alternator was then started up and as its output frequency rose the motor speed

A Synchronous Machine with Double (or "Differential") Supply to the Stator

altered. The motor operated stably at speeds ranging from 0.5 to 0.1 of synchronous speed. At lower speeds the motor either ran out of synchronism or stopped or again ran up to half synchronous speed.

The possibility of using the machine as a contactless selsyn was verified on an induction regulator, type I6713013, by supplying symmetrical voltages of the same frequency but different phase-sequence to the two ends of the stator winding. One of the rotor windings was shorted. On altering the phase of one of the applied voltages, the rotor of the machine followed the change, and as the phase changed through 360° electrical the rotor turned through 180° mechanical.

Machines of the type described may prove useful when it is necessary to avoid the use of sliding contacts.

There are 3 references, of which 2 are Soviet and 1 English.

Card 4/5

SOV/144-59-10-7/20

A Synchronous Machine with Double (or "Differential") Supply to the Stator

ASSOCIATION: Kafedra teoreticheskoy elektrotekhniki i schetno-reshayushchikh ustroystv, Taganrogskiy radiotekhnicheskiy institut (Chair for Theoretical Electrical Engineering, and Analog Computers, Taganrog Radio-engineering Institute)

SUBMITTED: June 17, 1959

Card 5/5

L 29539-66 EWT(m)/EWP(j)/T IJP(c) GG/RM

ACC NR: AP6007771 (A) SOURCE CODE: UR/0195/66/007/001/0027/0032

AUTHOR: Dolmatov, S. A.; Polak, L. S.

ORG: Institute of Petrochemical Synthesis im. A. V. Topchiyev, AN SSSR (Institut neftekhimicheskogo sinteza AN SSSR)

TITLE: Kinetics of radiation-induced allyl polymerization. II.

SOURCE: Kinetika i kataliz, v. 7, no. 1, 1966, 27-32

TOPIC TAGS: polymerization kinetics, allyl alcohol, amorphous polymer, irradiation

ABSTRACT: Allyl alcohol was polymerized by irradiation and the effects of solvent, inhibitors, and oxide addition are investigated. The study was made with dose rates of 243-850 r/sec and at temperatures of -78°, 52°, and 300°C. Polymerization is assumed to follow a radical mechanism. Cyclohexane, water, and benzene were used as solvents; the resulting polymer was insoluble in these solvents which makes for an increased rate of conversion (gel effect) when the polymer precipitates. The polymer has a transparent, egg-white appearance. Diphenylpicrylhydrazyl, benzoquinone, hydroquinone, pyrogallol, and atmospheric oxygen are studied as inhibitors. Polymerization with these inhibitors occurs in mass and in an azeotropic mixture of monomer and water. Of the five, DPPH and oxygen fail to show inhibitory effects. Al_2O_3, ZnO, and silica are added in concentrations of 40-50 wt % but fail to affect the rate of polymerization. The

UDC: 541.124:542.952.6 + 541.15

Card 1/2

L 29539-66

ACC NR: AP6007771

limiting viscosity number bar η is determined as a function of polymer yield. There is an abrupt increase in η when the wt % yield reaches 80. The increase in η is interpreted as an abrupt increase to 10^3-10^4 in the degree of polymerization, $\bar{P}$. Compared to other polymers, a low η of the order of 1-10 ml/g is found even at considerable $\bar{P}$ indicating that the polymer molecule is considerably branched and probably spherical in solution. The Huggins constant is found in the region of 1-3. Infrared bands for C=C and C-H deformation are reduced in intensity as the yield of polymer is increased. The amorphous polymer formed at doses up to $1.2 \cdot 10^9$ r is completely soluble in a hot mixture of methanol and HCl. Orig. art. has: 4 figures, 1 table.

SUB CODE: 07/ SUBM DATE: 17Feb64/ ORIG REF: 005/ OTH REF: 006

Card 2/2 PB

DOLMATOV, S.A.; POLAK, L.S.

Kinetics of radiation-induced allyl polymerization. Part 1. Kin. i kat. 6 no.5:797-801 S-O '65. (MIRA 18:11)

1. Institut neftekhimicheskogo sinteza imeni A.V.Topchiyeva AN SSSR.

DOLMATOV, S.N.; DEMICHEV, A.D. (g.Kuybyshev)

Applying the new technology. Put' i put.khoz. no.12:21 D '59.
(MIRA 13:4)

(Railroads--Maintenance and repair)

USSR / Farm Animals. Poultry. Q

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 21295

Author : Dolmatov, T. S.
Inst : Lvov Oblast Society for the Advancement of Political and Natural Sciences, UkSSR
Title : The Composition of L'vovskaya Oblast' Hens According to Breeds

Orig Pub : Byul. ei'skogospod. Inform. L'vivs'ke obl. bid. t-fa dlya poshir. polit. i nauk znan' URSR, 1957, No 2, 17-20

Abstract : Forty kolkhoz chicken-raising farms were investigated as well as 250 homestead farms with a total of 15,000 chickens, which included 49 percent of Leghorns, 19 percent of local clay-colored chickens, 15 percent of local black chickens 8 percent of Sussex-metis chickens, 8 percent of cuckoos' breed chickens, 1 percent Rhode

Card 1/3

USSR / Farm Animals. Poultry. Q

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 21295

Island and other breed chickens. At an average live weight of 1.74 kg, a maximum weight of 1.9 kg was attained by Sussex-metis and the minimum weight of 1.6 kg by Leghorn chickens. At an average egg production of 57.1 eggs per 1 head for a period of 6 months, first place with 63.5 eggs was held by the local black chickens, whereas the last place was occupied by local clay-colored chickens with 48.1 eggs. The average egg weight amounted to 53.82 g, the maximum to 73, the minimum to 35 g, the largest eggs are obtained from Rhode Island, Sussex-metis and local black chickens. After a 15-day fattening period, the average weight gain amounted to 14 percent, a maximum of 17.4 percent is found in Sussex, the minimum of 12.7 percent in local chickens of the cuckoos breed. Slaughtered returns: average 86.1 percent, maximum of

Card 2/3

USSR / Farm Animals. Poultry. Q

Abs Jour : Ref Zhur - Biologiya, No 5, 1959, No. 21295

86.6 percent in chickens of the cuckoos breed, minimum of 85.5 percent in Leghorns. The local black breed and Sussex have the best quality meat, the clay-colored breed has meat with the toughest fiber. Chemical analysis: in terms of protein and fat contents, first place is occupied by the black breed (28.1 of protein and 1.47 of fat), last place is occupied by Leghorns (22.8 and 1.2, respectively). A number of measures is recommended. -- B. I. Kazachek

Card 3/3

DOLMATOV, T. S. Cand Agr Sci -- (diss) "Chickens of L'vovskaya Oblast and their improvement." Khar'kov, 1958. 17 pp (Min of Agriculture USSR. Khar'kov Zootechnological Inst), 100 copies (KL, 11-58, 119)

ZAYTSEV, K.T.; AYUKOV, A.S.; DOLMATOV, V.A.

Blast furnace trial operation with raw Atasu ore. Stal' 21 no.12:1059-1062 D '61. (MIRA 14:12)

1. Karagandinskiy metallurgicheskiy zavod.
(Blast furnaces)
(Atasu region--Iron ores)

DOLMATOV, V.A.; GLOVATSKIY, A.B.

Desulfuration of pig iron in the ladle. Metallurg 8 no.10: 8-9 O '63. (MIRA 16:12)

1. Karagandinskiy metallurgicheskiy zavod.

GLOVATSKIY, A.B.; KHAVKIN, V.I.; DOLMATOV, V.A.; ZUYEV, B.P.; BONDARENKO, V A.

Desulfuration of cast iron with soda briquets outside a blast furnace. Metallurg 9 no.9:4-5 S '64.

(MIRA 17:10)

1. Karagandinskiy metallurgicheskiy zavod.

DOLMATOV, V.A., inzh.; GLOVATSKIY, A.B., inzh.; KHAVKIN, V.I., inzh.

Selecting the optimum kinetic energy of the blast an avoiding the burning-up of the tuyeres at the Karaganda Metallurgical Plant. Stal' 23 no. 3:207-210 Mr '64. (MIRA 17:5)

1. Karagandinskiy metallurgicheskiy zavod.

GLOVATSKIY, A.P.; DOLMATOV, V.A.; KHAVKIN, V.I.; PANFILOV, G.A.

Characteristics of sulfur behavior in Karaganda metallurgical plant's blast furnaces in the case of a high sulfur content in the ore part of the charge mixture. Izv.vys.ucheb.zav.; chern.met. 8 no.8:28-33 '65. (MIRA 18:8)

1. Karagandinskiy metallurgicheskiy zavod.

STARSHINOV, B.N.; OSTROUKHOV, M.Ya.; KOCHINEV, Ye.V.; Prinimali uchastiye: TARASOV, D.A.; SOROKA, P.F.; KARACHENTSEV, M.D.; OS'KIN, V.T.; KORNEV, V.K.; POPOV, Yu.A.; DOLMATOV, V.A.; AYUKOV, A.S.

Blowing-in of large blast furnaces. Sbor.trud. UNIIM no.11:27-32 '65. (MIRA 18:11)

STARSHINOV, B.N.; SINITSKIY, V.D.; SEN'KO, G.Ye.; GULYGA, D.V.; BABIY, A.A.; KHORUZHIY, A.G.; Prinimali uchastiye: OSTROUKHOV, M.Ya.; SAVELOV, N.I.; PLISKANOVSKIY, S.T.; MOISEYEV, Yu.G.; LAVRENT'YEV, M.L.; TARASOV, F.P.; ZAGREBA, A.V.; KAMENEV, R.D.; TKACHENKO, A.A.; FREYDIN, L.M.; LUKIN, P.G.; POPOV, Yu.A.; MISHIN, P.P.; KARACHENTSEV, M.D.; DOLMATOV, V.A.; AYUKOV, A.S.; PALAGUTA, V.P.; VYAZOVSKIY, Yu.V.; SOLODKIY, Yu.A.; KONAREVA, N.V.; SAPRONOV, Yu.V.; SINITSKAYA, S.K.; SAPRONOV, B.V.; LEKAREV, V.L.; STOLYAR, V.V.; PROKHORENKO, Z.A.; BANDINA, Ye.Ye.

Results of the first year of operation of large capacity blast furnaces. Sbor. trud. UNIIM no.11:34-46 '65.

(MIRA 18:11)

DOLMATOV, V.S., insh.

Means for perfecting Nosonenko's mechanical system of staff catching. Avtom., telem.i sviaz 2 no.4:41-42 Ap '58. (MIRA 12:12)

1. Buzulukskaya distantsiya signalizatsii i svyazi Kuybyshevskoy dorogi.
(Railroads--Safety appliances)

DOLMATOV V. Ya.

NEKRASOV, K.D., doktor tekhnicheskikh nauk; DOLMATOV, V.Ya., kandidat tekhnicheskikh nauk; TARASOVA, A.P., inzhener

Heat-resistant concretes for factory floors exposed to heat. Rats. i izobr. predl. v stroi. no.95:3-8 '54. (MLRA 8:7)

1. Tekhnicheskoye upravleniye Ministerstva stroitel'stva.
(Floors, Concrete)

L 09260-67

ACC NR: AP6029972 SOURCE CODE: UR/0413/66/000/015/0166/0166

INVENTORS: Dolmatov, V. Ya.; Kim, I. P.

ORG: none

TITLE: An acid-resistant material. Class 80, No. 184690 [announced by Central Scientific Research and Design-Experimental Institute of Industrial Buildings and Structures (Tsentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy institut promyshlennykh zdaniy i sooruzheniy)]

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 166

TOPIC TAGS: sodium compound, filler, acid resisting material, aniline

ABSTRACT: This Author Certificate presents an acid-resistant material based on water glass and a mineral filler with an admixture of sodium fluorosilicate. To render this material waterproof, it is mixed with furyl alcohol taken in the amount of 3--10% by weight of the water glass, and with a hardener such as aniline hydrochloride in the amount of 0.45--1.5%.

SUB CODE: 07/ SUBM DATE: 18Jan65

UDC: 666.972.52

Card 1/1

1. DOLMATOV, Ye.

2. USSR (600)

4. Horse Training

8. Reorganization of work in the training and trials of trotters. Konevodstvo 22 no. 10 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

BORUL'NIK, A.K.; DOLMATOV, Ye.G.

Lathe attachments for external work. Stan.i instr. 27 no.10:35 O '56. (MLRA 9:12)

(Lathes--Attachments)

POGODIN-ALEKSEYEV, G.I., zasluzhennyy deyatel' nauki i tekhniki;
DOLMATOV, Ye.G., inzh.

Changes in the properties of steel during hardness testing by identation with a small ball. Metalloved. i term.obr. met. no.10:34-37 O '61. (MIRA 14:10)

1. Zavod obrabotki tsvetnykh metallov.
(Brinell test) (Steel--Testing)

DOLMATOV, Ye.G.; SITNIKOV, I.I.

Method for measuring the speed of plastic flow of steel during explosion elongation. Zav. lab. 24 no.5:629-631 '58. (MIRA 11:6)
(Steel--Testing)

DOLMATOV, Ye.G.; STEPANOV, S.I.

Utilizing metal chips in making forgings. Kuz.-shtam. proizv. 1 no.2:39-41 F '59. (MIRA 12:10)
(Forging)

23902

18.8200

S/129/61/000/010/007/012
E193/E135

AUTHORS: Pogodin-Alekseyev, G.I., Honoured Scientist and Technologist, and Dolmatov, Ye.G., Engineer.

TITLE: Variation of properties of steel during hardness testing with the aid of a spherical indenter

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no.10, 1961, 34-37

TEXT: One of the standard methods of hardness testing consists in pressing a spherical indenter into the surface of the metal tested and measuring the size of the indentation obtained under a predetermined load. As the indenter enters the metal, the latter undergoes plastic deformation and the resultant strain-hardening is bound to affect the test results. The object of the present investigation was to study plastic deformation of metals during hardness testing and its effect on the results obtained. Technical iron, steel 3 (in the annealed, hardened, or aged condition), steel 20, and steel 45 were used in the experiments which consisted in taking hardness measurements on a Rockwell hardness testing machine with a spherical indenter 1.589 mm dia.,

Card 1/04

Variation of properties of steel ...

and determining the effect of the variation of the load, P, (50, 90, and 140 kg) on the indentation depth, h, indentation modulus P/h, and hardness number HB. Some of the results are reproduced in Fig.1, showing the variation of HB determined for the 0-50, 50-90, and 90-140 kg intervals (graph a) and for the 50, 90, and 140 kg loads (graph б). Curves 1-7 relate to: 1 - steel 45; 2 - steel 3 aged for 15 days; 3 - steel 3 aged for 5 days; 4 - hardened steel 3; 5 - steel 20; 6 - annealed steel 3; 7 - technical iron. Analysis of these and other results has led the present authors to the following conclusions. 1) When a spherical indenter is used, h is not proportional to P because both the geometry of the system and the structural state of the metal tested change with increasing P. In contrast to conical or pyramidal indenters for which both the angle of taper and the indentation angle remain constant and which consequently produce geometrically similar indentations, irrespective of the magnitude of P, the angle of taper and the indentation angle of a sphere (equal, respectively, 180 and almost zero degrees at the initial moment of a hardness test) change in the course of the test.

Card 2/5

Variation of properties of steel ...

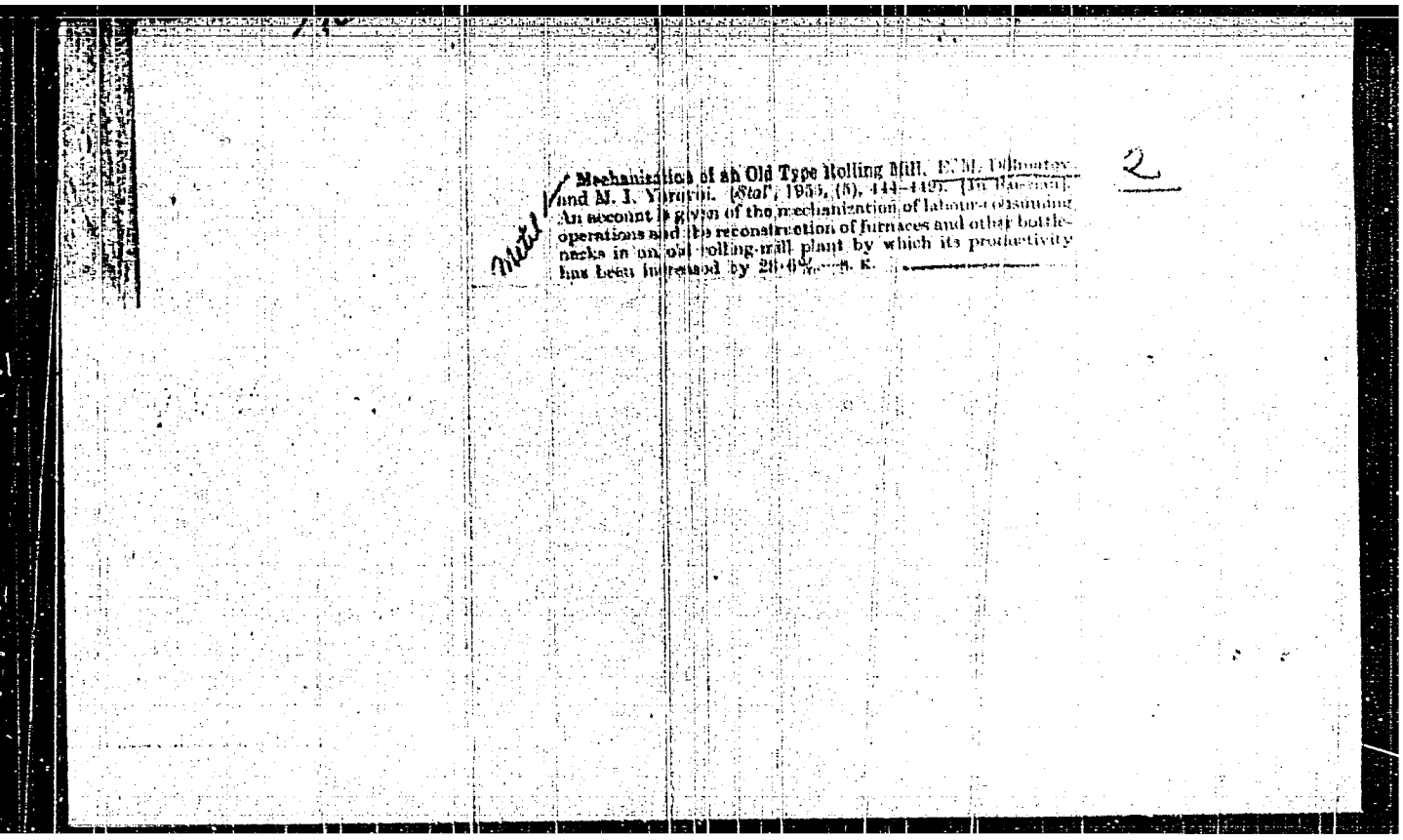
As the spherical indenter enters the metal under test, the angle of taper decreases and the indentation angle increases. The smaller the angle of taper, the easier it becomes for the indenter to enter the metal. Consequently, a two-fold increase in P will produce more than a two-fold increase in h which means that the effect of the geometrical factor discussed above is to reduce HB with increasing P. The effect of the structural factor is opposite, since the degree of plastic deformation and, therefore, the degree of strain-hardening increase with increasing P. 2) In the case of metals that do not strain-harden readily, HB may remain constant or even decrease initially as progressively higher P is applied. However, a stage will be reached when the effect of strain-hardening becomes more pronounced than that of the geometrical factor, and further increases in P will bring about an increase in HB. 3) The rate at which HB of plastic metals increases with increasing P is faster than that for relatively hard materials. As a result, a soft metal tested under a sufficiently high P may have a HB higher than that of a relatively hard metal tested under the same conditions. It is for this reason that differences in hardness of various steels tend

Variation of properties of steel ...

to be obliterated when high P in conjunction with a spherical indenter are used in hardness testing. 4) The strain-hardenability of the materials studied in the course of the present investigation increased in the order of decreasing hardness.
There are 2 figures and 1 table.

ASSOCIATION: Zavod obrabotki tsvetnykh metallov
(Plant for Treatment of Non-Ferrous Metals)

Card 4/5



Mechanization of an Old Type Rolling Mill. [V.M. Dilmontev and M. I. Yarovoi. (*Stal'*, 1955, (5), 444–449. [In Russian]. An account is given of the mechanization of labour-consuming operations and the reconstruction of furnaces and other bottlenecks in an old rolling-mill plant by which its productivity has been increased by 21·6%.—S. K.

2

DOLMATOV, Yu.D.; Prinimala uchastiye: SOKOLOVA, N.S.

Determining free acid content in the salt solutions of titanium and iron by means of potentiometric titration. Lakokras.mat.i ikh prim. no.2:57-58 '62. (MIRA 15:5)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.
(Acids, Organic) (Salts) (Potentiometric analysis)

DOLMATOV, Yu.D.; Prinimala uchastiye: SOKOLOVA, N.S.

Using the turbidimetric method for the dispersion analysis of titanium dioxide. Lakokras.mat.i ikh prim. no.5:52-55 '62. (MIRA 16:1)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.
(Particle size determination)
(Titanium oxides--Analysis)

BOBYRENKO, Yu.Ya.; DOLMATOV, Yu.D.; Prinimali uchastiye: ZAV'YALOVA, V.I.; MOISENKOVA, V.D.; KONOVALOV, V.K.

Rapid method of determining the dispersion composition of titanium dioxide pigments. Lakokras.mat.i ikh prim. no.6:52-53 '62. (MIRA 16:1)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.
(Pigments—Testing) (Titanium oxides)

DOLMATOV, Yu.D.; BOBYRENKO, Yu.Ya.

Methods of dispersion analysis of inorganic pigments. Lakokras. mat. i ikh prim. no.3:54-57 '63. (MIRA 16:9)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.
(Pigments) (Particle size determination)

DOLMATOV, Yu.D.

Stabilization of TiO_2 suspensions in sedimentation analysis. Lakokras. mat. i ikh. prim. no.5:45-46 '63. (MIRA 16:11)

SALIN, A.A.; MIMATOV, Yu.D.

Removal of lead from TiO_2 by the method of isomorphic crystallization of strontium and lead sulfates from process liquors. Zhur. prikl. khim. 38 no.1:180-181 Ja '65. (MIRA 18:3)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.

LIMAR', T.F.; UVAROVA, K.A.; BULACHEVA, A.F.; SGYVUBM, A.S.; BEDNOVA, I.N.; MAKOVSKAYA, E.B.; SOLOMEINA, G.I.; DOLMATOV, Yu.D.; BOBYRENKO, Yu. Ya.; KOGAN, F.I.; KOVALENKO, P.N.; IVANOVA, Z.I.; FOKIN, A.V.; KOMAROV, V.A.; SOROCHKIN, I.N.; DAVYDOVA, S.M.; RAVDEL', A.A.; GORELIK, G.N.; DAUKSHAS, V.K. [Dauksas, V.]; PIKUNAYTE, L.A. [Pikunaite, L.]; SHARIPOV, A.Kh.; SHABALIN, I.I.; STEPNOVA, G.M.; SHMIDT, Ye.V.; DUBOV, S.S.; STRUKOV, O.G.

Scientific research papers of the members of the All-Union Mendeleev Chemical Society (brief information). Zhur. VHKO 10 no.3:350-360 '65. (MIRA 18:8)

1. Donetskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv (for Limar', Uvarova, Bulacheva). 2. Ural'skiy nauchno-issledovatel'skiy khimicheskiy institut (for Shubin, Bednova, Makovskaya, Solomeina). 3. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta mineral'nykh pigmentov (Dolmatov, Bobyrenko). 4. Rostovskiy-na-Donu universitet (for Kogan, Kovalenko, Ivanova). 5. Leningradskiy tekhnologicheskiy institut imeni Lensoveta i Institut mineral'nykh pigmentov (for Ravdel', Gorelik). 6. Vil'nyusskiy gosudarstvennyy universitet imeni Kpsukasa (for Daukshas, Pikunayte). Nauchno-issledovatel'skiy institut neftekhimicheskikh proizvodstv (for Sharipov, Shabalin). 8. Tomskiy politekhnicheskiy institut imeni Kirova (for Stepnova, Shmidt).

SHIROKOV, V.I., red.; VIL'CHINSKAYA, L.P., red.; NOVIKOVA, A.M., red.; KUPTYREVA, Z.I., red.; DONETS, Ye.P., red.; KASTRYKINA, M.A., red.; DOLMATOVA, A.S., red.; BENEVOLENSKIY, I.I., red.; BOL'SHAKOVA, N.L., red.; BELYAKOV, P.V., red.; BADINA, L.S., tekhn. red.

[The economy of Ivanovo Province; statistical abstract] Narodnoe khoziaistvo Ivanovskoi oblasti; statisticheskii sbornik. Ivanovo, Gosstatizdat, 1962. 227 p. (MIRA 16:6)

1. Ivanovo (Province)Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Ivanovskoy oblasti (for Belyakov). 4. Statisticheskoye upravleniye Ivanovskoy oblasti (for all except Badina). (Ivanovo Province--Statistics)

USSR/Medicine - Mosquitoes 11 Nov 49
Climate

"Morphological Adaptation of Mosquitoes (Phlebotomus) to Dry and Damp Climates," A. V. Dolmatova, Inst of Malaria, Med Parasitol, and Helminthol, Min of Pub Health USSR, 3 pp

"Dok Ak Nauk SSSR" Vol LXIX, No 2

Respiratory index (ratio of length of anterior respiratory organs of thorax to length of central thorax), tabulated for various Russian and South American mosquitoes, is indication of degree of resistance to dry climates in mosquitoes.

157T61

USSR/Medicine - Mosquitoes (Contd) 11 Nov 49

Study of occurrence of different varieties in relation to dryness of air will be aid in war against these insects. Ph. major is found in Crimea (92% of all mosquitoes), Transcaucasia, Central Asia, and South Kazakhstan. Ph. perniciosus var. tobbi is found only in Transcaucasia and Northern Caucasus. Both varieties can exist in dry climates only because of their adaptability to biotopes and to refuges with moister microclimates. Ph. papetasii and groups of Ph. minutus are Central Asiatic varieties (Tadzhikistan and Feodosia). Submitted by Acad K. I. Skryabin 20 Sep 49.

157T61

DOLMATOVA, A. V.

DOLMATOVA, A.V.; KUVICHINSKIY, B.S.; LEYBMAN, A.L.

Mosquitoes (Phlebotomus) of the southern shore of the Crimea and their control. Med.paraz.i paraz.bol. no.5:455-460 S-O '53. (MLRA 6:12)

1. Iz entomologicheskogo otdela Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (direktor - professor P.G.Sergiyev, zaveduyushchiy otdelom - professor V.N.Beklemishev) i Krymskoy oblastnoy protivomalyariynoy stantsii (glavnyy vrach A.L.Leybman). (Crimea--Mosquitoes) (Mosquitoes--Crimea)

DOLMATOVA, A.V.

Differences in ecological requirements of certain types of mosquitoes (Phlebotomus): shelter, habitat cycle. Med.paraz.i paraz.bol. no.1:33-42 Ja-Mr '54. (MLRA 7:3)

1. Iz entomologicheskogo otdela Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (direktor instituta - professor P.G.Sergiyev, zaveduyushchiy otdelom - professor V.N.Beklemishev). (Mosquitoes)

DOLMATOVA, A.V.

"Field methods of studying Phlebotomus flies and measures for their control." P.A.Petrishcheva. Reviewed by A.V.Dolmatova. Med. paraz. i paraz. bol. no.3:273-274 Jl-S '54. (MLRA 8:2)
(PETRISHCHEVA, P.A.) (MOTH FLIES)

DOLMATOVA, A. V.; IMIOLEVA, A. L.; LEYBMAN, A. L.

Biology of mosquitoes Phlebotomus perfilievi Parr., 1930. Med. paraz. i parazit. bol. 24 no.4:339-400 O-D '55. (MLRA 9:1)

1. Iz entomologicheskogo otdela Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir.-instituta-prof. P. G. Sergiyev, zav. otdelom-prof. V. N. Beklemishev) i parazitologicheskogo otdela Krymskoy oblastnoy sanitarno-epidemiologicheskoy stantsii (zav. stantsiey N. N. Zolotarevskaya).

(MOSQUITOES,
phlebotomus perfilievi)

DOLMATOVA, A.V.,; PERFIL'YEV, P.P.,; LIL'P. G.O.

Moth flies (Phlebotomus) in the forests of the U.S.S.R. Med. paraz. 25 no.1:38-40 Ja-M '56 (MLRA 9:6)

1. Iz Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir.-instituta prof. P.G. Sergiyev) i kafedry obshchey biologii i parazitologii voyenno-morskoy meditsinskoy akademii (nach. kafedry-prof. P.P. Perfil'yev)

(PHLEBOTOMUS
Phlebotomus species in forests of Russia)

DOLMATOVA, A.V.

"Regional, general and experimental parasitology and medical zoology". Vol. 9. Reviewed by A.V. Dolmatova. Med. paras. 25 no.1: 88 Ja-M '56 (MLRA 9:6)

(PARASITOLOGY) (ZOOLOGY, MEDICAL)

DOLMATOVA, A. V.

MOROZOVA, V.P.; DOLMATOVA, A.V.; KIRICHENKO, A.G.; LEYBMAN, A.L.; TAGUZOV, [redacted]

Organization of fly control in Yalta [with summary in English]. Med.paraz. i paraz.bol. 26 no.1:17-20 Ja-F '57. (MLRA 10:6)

1.Iz Krymskoy oblastnoy protivomalyariynoy stantsii, Instituta malarii meditsinskoy parazitologii i gel'mitologii Ministerstva zdravookhraneniya SSSR, Yaltinskoy sanitarno-epidemiologicheskoy stantsii i Yaltinskogo gorzdravotdela.

(FLIES, control in Russia)

BEKLEMISHEV, V.N., prof.; VINOGRADSKAYA, O.N.; DARSKAYA, N.F.; DERBENEVA-UKHOVA, V.P.; DETINOVA, T.S.; DOLMATOVA, A.V.; LANGE, A.B.; OLSUF'YEV, N.G.; POSPELOVA-SHTROM, M.V.; RODENDORF, B.B.; SHIPITSINA, N.K.; PLAVIL'SHCHIKOV, N.N., red.; LYUDKOVSKAYA, N.I., tekhn.red.

[Guide to arthropods harmful to human health] Opredelitel' chlenistonogikh, vrediashchikh zdorov'iu cheloveka. Moskva, Gos. izd-vo med.lit-ry, 1958. 419 p. (MIRA 12:5)

1. Deystvitel'nyy chlen AMN SSSR (for Beklemishev). 2. Institut malyarii i meditsinskoy parazitologii Ministerstva zdravookhraneniya SSSR (for Beklemishev, Derbeneva-Ukhova, Detinova, Dolmatova, Pospelova-Shtrom, Shipitsina). 3. Kafedra parazitologii TSentral'nogo inst. usovershenstvovaniya vrachey (for Vinogradskaya). 4. Nauchno-issledovat.inst. Kavkaza i Zakavkaz'ya Ministerstva zdravookhraneniya SSSR v Stavropole (for Darskaya). 5. Kafedra entomologii Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova (for Lange). 6. Otdel parazitologii i meditsinskoy zoologii Inst. epidemiologii i mikrobiologii im. N.F.Gamaleĭ AMN SSR (for Olsuf'yev). 7. Institut paleontologii Akademii nauk SSSR (for Rodendorf).

(ARTHROPODA) (INSECTS AS CARRIERS OF DISEASE) (PARASITES--MAN)

DOLMATOVA, A.V.; DERGACHEWA, T.I.; GASANZADE, G.B.

Studies on species and ecology of Phlebotominae in a focus of visceral leishmaniasis in Azerbaijan (Agdam region) [with summary in English]. Med.paraz. i paraz.bol. 27 no.6:676-683 N-D '58. (MIRA 12:2)

1. Iz Instituta malyarii, meditsinskoy parazitologii i gel'mintologii Ministerstva zdravookhraneniya SSSR (dir. instituta - prof. P.G. Sergiyev) i Instituta malyarii Ministerstva zdravookhraneniya Azerbaydzhanskoy SSR (dir. instituta A.K. Kasimov).

(LEISHMANIASIS, VISCERAL, epidemiol,
Phlebotomus in epidemiol. areas (Rus))
(FLIES,
Phlebotomus in zones of epidemics of visceral leishmaniasis in Russia (Rus))

DOLMATOVA, A. V., Doc of Bio Sci — (diss) "Mosquitoes (Phlebotominae) of the USSR; Their Biology, Medical Significance and Measure of Controlling Them," Moscow, 1959, 27 pp (Acad of Med Sci USSR) (KL, 5-60p 124)

DOLMATOVA, A. V.

"The Differneces in the Ecological Requirements of Certain Species of Phlebotominae in the USSR."

report presented at the Intl. Congress of Entomology, Vienna, Austria, 17-25 August 1960.

DOLMATOVA, A.V.

Vladimir Nikolaevich Beklemishev; on his 70th birthday. Biul. MOIP. Otd. biol. 66 no.1:153-154 Ja-F '61. (MIRA 14:3)
(BEKLEMISHEV, VLADIMIR NIKOLAEVICH, 1890-)

DOLMATOVA, A.V.; DERGACHEVA, T.I.

Epidemiology and epizootology of cuatneous leishmaniasis of the rural type in the Karshi Oasis of the Uzbek S.S.R. Report No.1: Fauna and seasonal variations in the number of Phlebotamus. Med. paraz.i parez.bol. no.5:584-591 '61. (MIRA 14:10)

1. Iz entomologicheskogo otdela Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martsinovskogo Ministerstva zdravookhraneniya SSSR (dir. instituta - prof. P.G. Sergiyev, zav. otdelom - prof. V.N. Beklemishev).
(KARSHI--DELHI BOIL) (MOTH FLIES)

DOLMATOVA, A.V.; DERGACHEVA, T.I.

Breeding and circulation of sand flies (Phlebotomirae) in the burrows of greater gerbils (Rhombomys opimus). Med. paraz. i paraz. bol. 32 no.1:72-77 Ja-F'63. (MIRA 16:10)

1. Iz otdela entomologii (zav. - prof. V.N.Beklemishev [deceased]) Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I.Martsinovskogo (dir. prof. P.F.Sergiyev) Ministerstva zdravookhraneniya SSSR.

DOLMATOVA, A.V.

Basic factors determining the epidemiological significance of individual species of sandflies (phlebotominae) in foci of leishmaniasis. Med. paraz. i paraz. bol. 34 no.3:297-302 My-Je '65. (MIRA 18:7)

DOLMATOVA, Anna Yakulovna; DEMINA, Nadezhda Alekseyevna; SCHENENOVICH, V.B., red.

[Mosquitoes (Phlebotominae) and diseases transmitted by them] Moskity (Phlebotominae) i bolezni, peredavaemye imi. Moskva, Meditsina, 1965. 209 p. (MIRA 18:10)

DOLMATOVA, I.I.; KONNOV, S.S.

Continuous AOR-1800-K unit for samming and scouring chrome pigkin leather. Kozh.-obuv. prom. 7 no. 10:14-18 O '65
(MIRA 19:1)

DOLMATOVA, K. A. Cand Phys-Math Sci -- (diss) "Longitudinal Beta β-Spectrometer With Compensated Spherical Aberration." Len, 1957. 8 pp 22 cm. (Academy of Sciences USSR, Len Engineering Physics Inst), (KL, 26-57, 104)

AUTHOR: DOLMATOVA, K.A., KEL'MAN, V.M. 20-6-16/59

TITLE: A Longitudinal β-Spectrometer with Compensated Spherical Aberration.
(Prodol'nyy β-spektrometr s kompensirovannoy sferioheskoy aberratsiyey. Russian).

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol 113, Nr 6, pp 1244 - 1247 (U.S.S.R.)

ABSTRACT: The spherical aberration described in the paper under review is compensated by a transverse magnetic field of the field strength $H = H_1/r$. The additional F is generated by a winding which concentrates in an annular focus the ions which fly out of the source in a wide solid angle. No difficulty is encountered in computing the electrons paths in the range of the homogeneous field. Also in the range where the homogeneous magnetic field is superposed with a field of the field strength $H = H/r$, the differential equations of the motion of the electrons are reduced to quadratures. The present paper contains the revalent formulae for the differential equations and for their solutions. The compensating field was applied in the neighborhood of the apex of the orbit. With the aid of these formulae a form was found for the boundary of the inhomogeneous field which guarantees an annular focus of aberration (if a point source is used). This focus coincides with the linear annular focus which is formed

Card 1/3

A Longitudinal β-Spectrometer with Compensated Spherical Aberration.

by an infinitely small bundle of the ions flying away under an angle of 30°.

The longitudinal field was generated by a coil of a length of 110 cm and of an internal diameter of 33 cm; this coil was wound on a copper tube. At the same time, this copper tube also served as chamber of the spectrometer . Additional improvements in the homogeneity of the field were achieved by the use of correcting coils. Almost everywhere the form of the coils was in agreement with the computed form of the boundary of the field. The radioactive source was glued to a fastener which was introduced into the vacuum chamber through a Wilson compression /?/ and through a vacuum tap. A counter (G-M5) with a window of a diameter of 90 mm served as detector. Employment of a compensating field reduces the width of the annular projection by about 2.5 times as compared to the width of the projection in a homogeneous field. Further investigations were conducted with the aid of a radioactive source (active ThB-precipitation) with the dimensions of 1 X 1 mm. A brief discussion of the results is given.(4 reproductions).

20-6-16/39

A Longitudinal β'Spectrometer with Compensated Spherical Aberration.

ASSOCIATION: Physical-Technological Institute, Academy of Sciences of the U.S.S.R.
PRESENTED BY: ARTISMOVICH, L.A., Member of the Academy, on 14 December 1956.
SUBMITTED: 1 October 1956
AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Kel'man, V. M., Peregud, B. P., Dolmatova, K. A. 57-28-5-26/36

TITLE: Accelerators With a Radially Growing Leading Field and Additional Electron Optical Elements for Securing the Vertical Focussing of the Beam (Uskoriteli s radial'no narastayushchim vedushchim polem i dopolnitel'nymi elektronnooptícheskimi elementami, obespechivayushchimi vertikal'nuyu fokusirovku puchka)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 5, pp. 1056-1064 (USSR)

ABSTRACT: The application of a radially decreasing field in modern weakly focussing accelerators is determined by the necessity of a vertical focussing of the beam of the accelerated particles. The new possibilities, which have been proposed from various sides (references 1-8) immediately attracted the interest of researchers. Recently, numerous experimental and theoretical investigations were conducted dealing with the application of these proposals in different types of accelerators (references 9-22). All these methods have the following in common: 1) The vertical field component is not constant in the middle plane and periodi-

Card 1/4

cally changes its value, or, with respect to the azimuth, even its direction. 2) The functions of the leading and of the focussing field are performed by one and the same field, which only formally can be regarded as a superposition of two fields. This field, however, is created only by one magnetic system; 3) The magnet poles must possess an accurately worked, complicated profile (method by Thomas and the spiral-sector variant) or the field must be created by a great number of accurately placed sector magnets. A series of shortcomings attached to the new accelerator constructions are a result of these circumstances. The authors propose another method. The focalization is effected by supplementary electron optical elements: with cylindrical magnetlenses or magnet gaps. The method guarantees the stability of the radial as well as of the vertical betatron oscillations and can be employed for the construction of circular accelerators of different types. In this paper the possible constructional variants of the focussing system are drawn into consideration and the electron model is described. The peculiarities of the proposed method differentiating it from earlier

ones, are as follows: 1) A separation of the functions of focalization and of leading the beam between two elements - the magnet and the focussing system. This guarantees the free choice of the shape of the leading field and facilitates its creation. As a result of the separation a facilitated leading of the beam and a slackening of the restrictions imposed upon the production and the mounting of the constructional nodes of the accelerator can appear. This is the case in particular, if small adjustments and a flexibility of the elements of the focussing system during the mounting of the accelerator are provided for. 2) The comparatively low weight of the electromagnet creating the leading field in comparison to the weight necessary in earlier methods. This is connected with the fact that the magnetic circuit of the focussing system is not closed by the yoke of this magnet. 3) An increase of the copper weight and of the necessary power. 4) A more simple construction of the electromagnet consisting of the possibility of employing a closed ring magnet with a low number of magnetizing coils and no sector magnet. An electronic simulator was built for experimental exa-

Accelerators With a Radially Growing Leading Field and Additional Electron Optical Elements for Securing the Vertical Focussing of the Beam

57-28-5-26/36

mination. A schematic cross section of this model is shown in figure 2. At present the model is prepared for experiments. The authors thank G.A. Grinberg, Yu.V. Vandakurov, D.G. Alkhazov and D.M. Kaminker. There are 3 figures and 29 references, 10 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR, Leningrad (Leningrad Physical-Technical Institute, AS USSR)

SUBMITTED: July 11, 1957

1. Particle accelerators--Design 2. Particle beams--Focusing

Card 4/4

21.2000,24.2000

77307
SOV/57-30-2-4/18

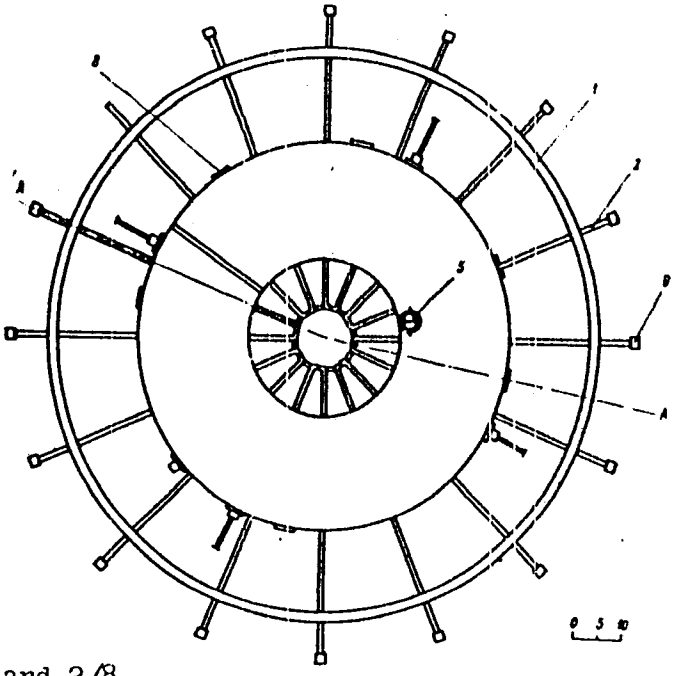
AUTHORS: Kel'man, V. M., Peregud, B. P., Dolmatova, K. A., Luzyanin, I. D.

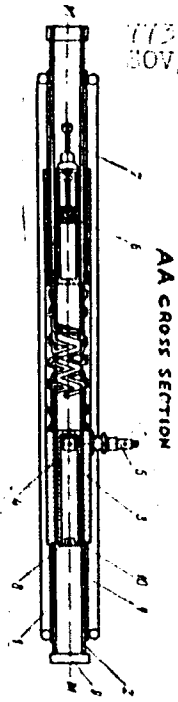
TITLE: Vertical Focusing of an Electron Beam Using Cylindrical Magnetic Lenses in an Axially Symmetrical Radially Increasing Magnetic Field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 2, pp 153-158 (USSR)

ABSTRACT: Kel'man and others (ZhTF, XXVIII, 1056, 1958) and Vandakurova (ZhTF, XXVIII, 1065, 1958) showed that radially arranged magnetic lenses may produce a vertical focusing of electrons moving in nearly circular, or spiral, orbits. The present paper describes experimental investigation of an electron motion in a radially increasing magnetic field whose defocusing effects are compensated by means of cylindrical magnetic lenses. Two equal ring-shaped flat coils (1) are producing the required field (see Fig. 1).

Card 1/8





77307
SOV/57-30-2-4/18

Fig. 1
(Caption on Card 3/8)

Card 2/8

Vertical Focusing of an Electron Beam Using Cylindrical Magnetic Lenses in an Axially Symmetrical Radially Increasing Magnetic Field

77307
SOV/57-30-2-4/18

Fig. 1. Diagram of experimental setup. (1) Coils of guiding field; (2) focusing systems; (3) holders; (4) chamber; (5) injector; (6) screen; (7) rod; (8) window; (9) jumper; (10) insulation.

Experiments were performed with two pairs of coils with a mean radius of 55 and 35 cm. The spacial arrangement of the focusing system (2) is shown on Fig. 4.

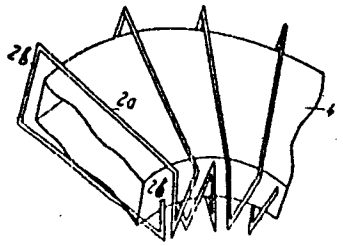


Fig. 4. Focusing system (schematic diagram). (2a) Copper rod; (2b) vertical jumper; (4) chamber.

Card 3/8

Vertical Focusing of an Electron Beam Using Cylindrical Magnetic Lenses in an Axially Symmetrical Radially Increasing Magnetic Field

77307
SOV/57-30-2-4/18

As seen, the entire system is a continuous circuit. The direction of horizontal field components of adjacent magnetic lenses is opposite. The vacuum chamber (4) has an inner radius of 17 cm and an outer of 35 cm. It is 2 cm high. The betatron injector 5 is of standard type with deflector 18 cm from the axis of the system. It could be rotated in the horizontal and vertical plane. The angle of divergence of the beam is 5°. The path of the beam was observed by means of willemite covered screens, while for intensity measurements the screens were replaced by copper plates, and the resulting inhibiting radiation was measured by means of Geiger counters through thin windows covered with thin organic glass (see Fig. 5. The injection was continuous by means of a constant 4 to 8 kv potential. In the case of the 35 cm coil of the guiding field with 8 kev electrons and 1,400

Card 4/8

Vertical Focusing of an Electron Beam Using Cylindrical Magnetic Lenses in an Axially Symmetrical Radially Increasing Magnetic Field

77307
SOV/57-30-2-4/18

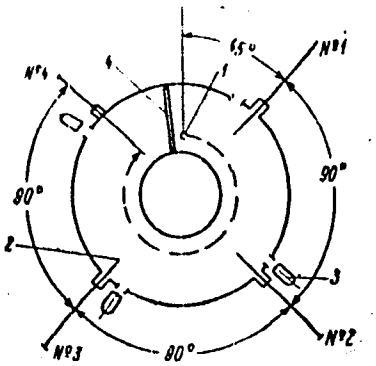


Fig. 5. Diagram of the distribution of screens and end-counters: (1) injector; (2) screen; (3) counter; (4) plate shielding the scattered X-ray radiation.

Card 5/8

Vertical Focusing of an Electron Beam Using Cylindrical Magnetic Lenses in an Axially Symmetrical Radially Increasing Magnetic Field

77307
SOV/57-30-2-4/18

ampere-turns on the coils, the authors found on the screen Nr 4 the beam to be well focused in the radial direction but completely out of focus in the vertical direction. A 300 a current in the focusing device reduced the beam to an approximate circle of 3 mm diam. The screen was at a distance of 24 cm from the axis of symmetry. The authors used the 55 cm coil to measure the average intensity at a fixed equilibrium orbit. The results are on Figs. 8 and 9. On Fig. 9, N_2 and N_4 are the counting rate intensities from the radiations originating at the screens Nr 2 and Nr 4. One sees that while without focusing the intensity after one half of a turn drops more than 13 times; for currents of more than 300 a the ratio is of the order of unity. There are 9 figures; and 2 Soviet references.

Card 6/8

Vertical Focusing of an Electron Beam Using Cylindrical Magnetic Lenses in an Axially Symmetrical Radially Increasing Magnetic Field

77307
SOV/57-30-2-4/18

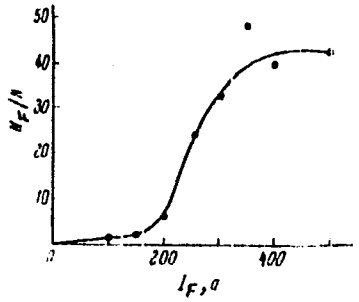


Fig. 8. Beam intensity versus current intensity in the focusing system at an angular distance of 135° from the injector. N_F = intensity of counting rate at a current I_F; N = intensity of counting rate at $I_F = 0$.

Card 7/8

Vertical Focusing of an Electron Beam Using Cylindrical Magnetic Lenses in an Axially Symmetrical Radially Increasing Magnetic Field

77967
SOV/57-30-2-4/18

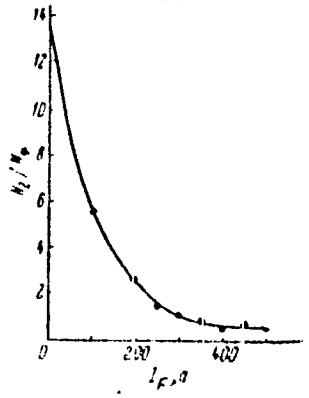


Fig. 9. N_2/N_4 ratio versus focusing current intensity I_F.

ASSOCIATION: Physico-Technical Institute AS USSR Leningrad (Fiziko-tekhnicheskiy institut AN SSSR Leningrad)

SUBMITTED: August 27, 1959

Card 8/8

22779
S/057/61/031/005/010/020
B104/B205

26.2021

AUTHORS: Ovsyannikov, V. A., Bulyginskiy, D. G., Galaktionov, B. V., and Dolmatova, K. A.

TITLE: Method of measuring the temperature of plasma in systems with magnetic plugs. I. The electron model

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 5, 1961, 577-581

X

TEXT: The authors describe a method that can be used to measure the velocity distribution of both electrons and ions in plasma. In test installations with magnetic fields of plug configuration, the plasma particles perform oscillations between the plugs. If an additional coil is installed near one of the plugs, which compensates the "plug" magnetic field for a short time, the plasma can escape from the traps in longitudinal direction. If an electrostatic analyzer is installed in the path of the plasma, it is possible to measure the energy distribution of the released plasma portion. The maximum permissible time for opening the plug is determined, during which the magnetic trap is not destroyed. The maximum opening time is 1 - 2 μsec. A retarding grid or collector is used

Method of measuring...

to measure the released plasma portion. This method can only be used for studying the "longitudinal" temperature of plasma. The "transverse" temperature can be measured by opening the magnetic plug partly, even though with less accuracy. In this way, those particles are measured the trajectories of which form an angle of 0 up to a certain value with the longitudinal axis of the traps. The experiments of the authors were intended to find out whether it is possible to open the magnetic plug for so short a time and to show that the energy distribution of the electrons is not affected by opening the plug. In the block diagram shown in Fig. 1, the electron trajectory forms an angle of 75° with the field. Previous experiments have shown that 1) it is possible to open the plug for a time that is short compared to the cycle of magnetic compression in thermonuclear devices of the "slow" type; 2) a pulse analysis of the energy distribution of the particles is possible. In this analysis, a retarding pulse with a steep leading edge is applied to the above-mentioned grid. The amplitude of the pulse is large enough to slow down even the fastest particles. Academician B. P. Konstantinov and V. Ye. Golant, Candidate of Physical and Mathematical Sciences, are thanked for discussions and interest in the work. N. I. Ionov is mentioned. There are 4 figures

Card 2/4

Method of measuring...

S/057/61/031/005/010/020
B104/B205

and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR Leningrad (Institute of Physics and Technology imeni A. F. Ioffe, AS USSR, Leningrad)

SUBMITTED: March 24, 1960

Legend to Fig. 1: 1) Rectifier; 2) power supply of the additional coil; 3) generator of retarding pulses; 4) ГИС-2 (GIS-2); 5) starting device; 6) oscilloscope.

Card 3/4

BULYGINSKIY, D.G.; GALAKTIONOV, B.V.; DOLMATOVA, K.A.; OVSYANNIKOV, V.A.

Method for measuring the energy distribution in particles emerging from a plasma. Zhur.tekh.fiz. 33 no.2:183-190 F '63. (MIRA 16:5)

1. Fiziko-tekhnicheskiy institut imeni A.F.Ioffe AN SSSR, Leningrad.
(Plasma (Ionized gases)) (Electrons)

ACCESSION NR: AT4025315 S/0000/63/000/000/0247/0255

AUTHORS: Galaktionov, B. V.; Dolmatova, K. A.

TITLE: Use of the retarding potential method for the study of the energy distribution of charged particles in the 'Alpha' installation

SOURCE: Diagnostika plazmy* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 247-255

TOPIC TAGS: plasma research, discharge plasma, charged particle distribution, electron energy, ion energy

ABSTRACT: A new type of analyzer, essentially an isolated probe introduced into the plasma, was developed for the determination of the energy distribution of plasma charged particles. The particle energy connected with the axial velocity component in a diaphragm is analyzed with the aid of a retarding potential applied to the analyzing grid. The apparatus was used to determine the dependence

Card 1/03

ACCESSION NR: AT4025315

of the energy distribution of the ions and electrons on the discharge parameters (capacitor-bank voltage, hydrogen pressure in the liner, dependence of the ion energy on the distance to the liner). The operation and the characteristics of the equipment are described. The measurements lead to the following conclusion: 1. The energy distribution of the charged particles from the "Alpha" apparatus plasma is close to Maxwellian in the energy range up to 400 eV. 2. The measured temperature of the ion component of the plasma depends on the discharge parameters and on the distance from the liner wall, and ranges from 20 to 130 eV, increasing with increasing distance from the liner and with decreasing pressure. 3. The measured electron temperature has the same dependence on the discharge parameters, and ranges from 40 to 100 eV. The electron temperature and its pressure dependence agree with the values determined from the noise temperature (M. M. Larionov, paper C. N.-10/24, Salzburg Conference, 4--9 September 1961), but disagree with the values obtained spectroscopically (A. N. Zaydel' et al, Zh. tekhn. fiz. v.

Card 2/3

ACCESSION NR: AT4025315

33, 200, 1963). Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: None

SUBMITTED: 19Oct63 DATE ACQ: 16Apr64 ENCL: 01

SUB CODE: ME, NP NR REF SOV: 005 OTHER: 004

Card 3/4

ACCESSION NR: AP4042946 S/0057/64/034/008/1533/1535

AUTHOR: Galaktionov, B.V.; Dolmatova, K.A.; Larionov, M.M.

TITLE: On the electron temperature and conductivity of the plasma in a high-current toroidal discharge

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.8, 1964, 1533-1535

TOPIC TAGS: plasma conductivity, electron temperature, hydrogen plasma

ABSTRACT: The authors have measured the conductivities and electron temperatures of hydrogen plasmas in the "Alpha" installation. The electron temperatures were determined from the probe characteristics of a three-grid electrostatic analyzer positioned with its axis parallel to the magnetic field. Observations were made with both of the two possible orientations of the probe with respect to the electron current. The thermal velocities of the electrons were found to be much greater than their average velocity. The electron temperatures decreased with increasing hydrogen pressure from 40 eV at 4×10^{-4} mm Hg to 20 eV at 16×10^{-4} mm Hg. The electron temperatures were also determined from the microwave noise level in the 3 to 12 mm wavelength region with the assumption that this noise represents black body radia-

Card 1/2

tion at the electron temperature. The results were in satisfactory agreement with the probe measurements, being from 10 to 30% lower. The conductivity of the plasma was determined experimentally from the current and the emf in the toroidal discharge tube, and it was calculated from the electron temperature by the $T^{3/2}$ law. The measured conductivities were much less (by about a factor 20 at 4×10^{-4} mm Hg) than the calculated, and they increased with increasing pressure. A similar discrepancy has been found with the "Zeta" installation by W.M.Burton, E.R.Butt, H.C.Cole, A. Gibson, D.W.Mason, R.S.Pease, K.Whiteman and R.Wilson (Conference on Plasma Physics and Controlled Nuclear Synthesis,Report CN 10/60, Salzburg,1961). The reason for this discrepancy is not known, but it is suggested that turbulent motion of the plasma, not taken into account in the derivation of the $T^{3/2}$ law, may be involved. It is concluded that one cannot reliably determine electron temperatures from measurements of plasma conductivities. Orig.art.has: 1 formula and 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR,Leningrad (Physico-technical Institute, AN SSSR)

SUBMITTED: 17Oct63

ENCL: 00

SUB CODE: NS

NR REF SOV: 006

OTHER:001

L 12832-65 EWT(l)/EWG(k)/EWT(m)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2
Pz-6/Pc-4/Pab-10/Pl-4 IJP(c)/BSD/AS(mp)-2/ASD(d)/AFWL/AEDC(b)/ASD(p)-3/ASD(a)-5/
ASD(f)-2/AFETR/SSD/ESD(gs)/ESD(t)/SSD(b) AT
ACCESSION NR: AP4041238 S/0057/64/034/009/1718/1720

AUTHOR: Galaktionov, B.V.; Dolmatova, K.A.; Larionov, M.I.

TITLE: On the ratio of the temperature of the ion and electron components of the plasma in the "alpha" installation

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.9, 1964, 1718-1720

TOPIC TAGS: plasma, ion temperature, electron temperature, plasma oscillation/ Alpha installation

ABSTRACT: The present authors (ZhTF 34,1951;Sb."Diagnostika plazmy".Gosatomizdat, M.1963) have measured electron and ion temperatures in the plasma of the "alpha" installation with the aid of a multi-channel electrostatic analyzer. They confirm the earlier view that the ion temperature exceeds the electron temperature, but the ratio of the ion to the electron temperature was found to be considerably smaller than had been at first supposed, the ratio being, namely, between 1.5 and 2. The relaxation time for temperature equilibration by ion-electron collision is estimated to be 10^{-5} sec, and it is found that a power of about 1 MeV/sec is required to maintain the observed temperature difference. Fluctuating electric fields with per-

1/2

L 12832-65
ACCESSION NR: AP4045288

5

iods of the order of 10^{-5} sec have been observed in discharges of the type discussed (W.M.Burton, E.P.Butt, H.C.Cole, A.Gibson, D.W.Mason, R.S.Pease, K.Whiteman and R.Wilson, Conference on research in the fields of plasma physics and controlled nuclear synthesis. Report C-10/80. Saltzburg, 1961), and it is concluded that the observed difference between the ion and electron temperatures can be explained by heating of the ions by these fluctuating fields and exchange of energy between ions and electrons through collisions. "In conclusion, the authors express their deep gratitude to V.Ye.Golant for his constant interest in the work and for discussing the results, and also to A.N.Timonin, K.A.Sorokin, V.P.Kovalenko and the whole group of coworkers of the "alpha" installation for assistance in organizing the measurements." Orig.art.has: 1 formula and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut im.A.F.Ioffe AN SSSR, Leningrad (Physicotechnical Institute, AN SSSR)

SUBMITTED: 08Apr64 ENCL: 00

SUB CODE: ME NR REF SOV: 007 OTHER: 001

2/2

DOLMATOVA, M.Yu.

Photocolorimetric determining of chromium in the commercial solutions of titanium sulfate. Lakokras. mat. i ikh prim. no.4:52-53 '63. (MIRA 16:10)

1. Chelyabinskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnogo instituta lakokrasochnoy promyshlennosti.

L 40962-65 EWT(m)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c) Pad IJP(c) JD/JW/HW/JG
ACCESSION NR: AP5006331 S/0126/65/019/002/0257/0262

42
41
B

AUTHOR: Dolmatova, P. I.; Korotayev, A. D.; Koneva, N. A.; Nalov, Yu. V.; Tukhfatullina, R. M.

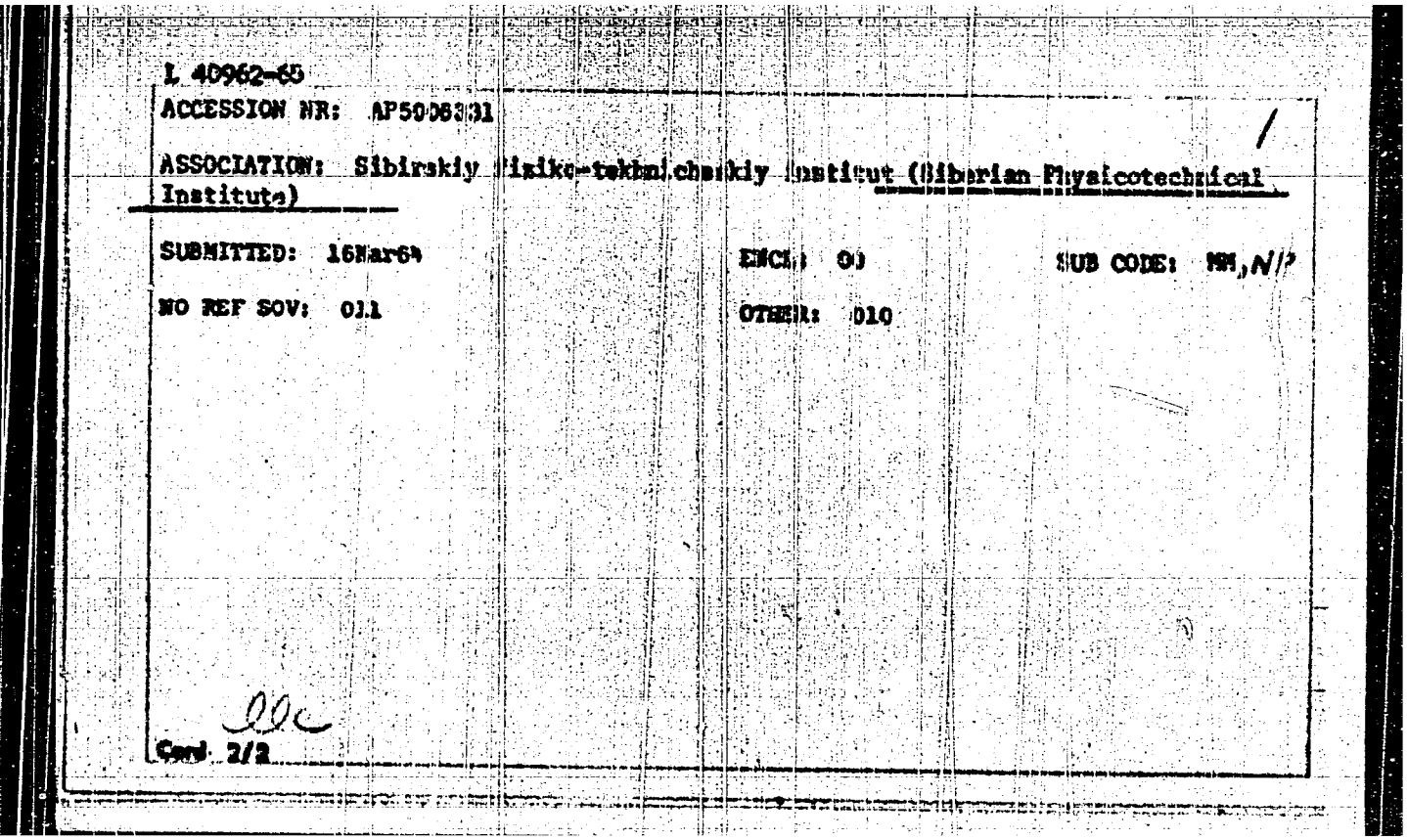
TITLE: Investigation of the activation energy of the atomic ordering process in alloyed permalloy

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 2, 1965, 257-262

TOPIC TAGS: activation energy, atom reorganization, permalloy, internal friction

ABSTRACT: By studying the electrical resistance change kinetics during annealing of hardened alloys deformed after hardening, the energy was measured for activation of the short-range order formation process in these alloys from room temperature to 400°C. It was observed that the activation energies of these processes below 150°C are 20 and 18 kcal/mol respectively for Ni-Fe-Mo and Ni-Fe-Cr alloys. At 200-400°C the activation energy values are higher (37 and 35 kcal/mol respectively). Three internal friction peaks, two of which lie below 160°C, are observed on the temperature curves for the internal friction of an Ni-Fe-Cr alloy deformed after hardening. The curves for the sizes and electrical resistance of the specimens during tempering after hardening and deformation are qualitatively similar. Orig. art. has: 4 figures.

Card 1/2



L 40962-65
ACCESSION NR: AP5008331

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut (Siberian Physicotechnical Institute)

SUBMITTED: 16Mar64 ENCL: 00 SUB CODE: NM, NP

NO REF SOV: 011 OTHER: 010

Card 2/2

L 26634-66 EWT(m)/EWP(w)/T/EWP(t) IJP(c) JD/JH

ACC NR: AP5025338 SOURCE CODE: UR/0126/65/ 020/003/0469/0472

AUTHOR: Panin, V. Ye.; Dudarev, Ye. F.; Butkevich, L. M.; Dolmatova, R. P.

ORG: Physico-Technical Institute of Siberia im. V. D. Kuznetsov (Sibirskiy fiziki-tekhnicheskiy institut)

TITLE: The effect of short-range order on the mechanical properties of solid solutions

SOURCE: Fizika metallov i metallovedeniye, v. 20, no. 3, 1965, 469-472

TOPIC TAGS: solid solution, copper alloy, aluminum alloy, zinc alloy, ordered alloy, solid mechanical property, material deformation, crystal dislocation

ABSTRACT: The authors present a more systematic investigation of solid solutions Cu-Al and Cu-Zn and express their findings on the causes of various effects of short-range order on the mechanical properties of the alloys. In order to confirm the assumption that various mechanical properties which result from the various degrees of alloy deformation will depend on the degree of short-range order, an investigation used the alloys Cu+17.3 mole% Al and Cu+38 mole% of Zn which have a considerable short-range order. The resistance of alloy to

Card 1/2 UDC: 548.0:539

L 26634-66

ACC NR: AP5025338

deformation as a function of temperature was also studied. The character of the effect of short-range order changes according to the resistance of deformation and degree of deformation. The effect of short-range order on the resistance of deformation with increase of degree of deformation at first decreases and then becomes inversely proportional to the Fischer effect. Similar results were obtained with Cu-Zn alloy. It was shown that the effect of character of the structural dislocation on the resistance of deformation greatly depends on the intensity of the system. Measurements of macrosolidity confirms that in this system of intensity the character of structural dislocation is signifficant and causes a strong abnormal dependence of the indicated characteristics on the degree of short-range order. Orig. art. has: 2 fig.

SUB CODE: 11,20/SUBM DATE: 05Oct64/ ORIG REF: 006/ OTH REF: 012

Card 2/2